FINAL REPORT

SUSTAINABLE FORAGE SYSTEMS

19960286

June 2001

Prepared by: Saskatchewan Stock Growers Association.

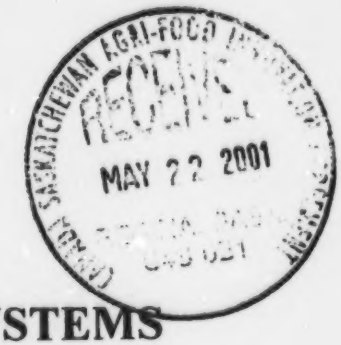
AGRI-FOOD INNOVATION FUND

Canada

Saskatchewan

Grazing & Pasture Technology Program

"Sustainability is our priority"



SUSTAINABLE FORAGE SYSTEMS

AFIF Project # 96000286

Final Report

April 1, 1997 – April 15, 2001

This Program is delivered by the Saskatchewan Stock Growers Association and Saskatchewan Agriculture and Food, and is supported by the Canada-Saskatchewan Agri-Food Innovation Fund

AGRI-FOOD INNOVATION FUND

EXECUTIVE SUMMARY

Introduction

The overall mission of the Project was: to work with farmers, ranchers and other land managers to achieve ecologically and economically sustainable rangeland and pasture resources.

The project had two integrated objectives:

(1) to conduct a field testing and data gathering activity addressing important range/pasture issues and opportunities; and

(2) to deliver an eco-region sensitive range and pasture extension program based on the best available information.

The project was administered jointly by the Saskatchewan Stock Growers Association (SSGA) and Saskatchewan Agriculture and Food (SAF). The Grazing and Pasture Technology program (GAPT) implemented the project under the direction of a steering committee representing government and non-government organizations. Semi-annual and annual progress reports were prepared throughout the Project duration. The present document summarizes the work accomplished over the entire Project duration (April 1997-April 2001).

The Extension Component

During the course of the project, we provided technical assistance to 7608 individual producers, including 1043 on-farm consultations. We manned displays at more than 30 major exhibitions, conferences and producer group annual meetings, attracting more than 3000 producers. Professional contacts totaled 6188 persons. Many of the professional contacts were made on behalf of producers.

The Project organized, sponsored and/or made presentations at 336 events attended by 11,805 participants. The above events included a large number of field days, local seminars, regional and provincial conferences and workshops. The events focused on forage selection and seeding; pasture management and rejuvenation; options for extending the grazing season; specialized livestock grazing; role of forages in sustainable agriculture; native plant identification; and native range management, monitoring and improvement. *Our most recent major event was an advanced grazing management workshop held in February 2001. The two-day event was originally planned to accommodate a maximum of 100 participants. Due to the unexpected response we had to make changes to accommodate 180 participants.*

We produced and distributed 11 issues of the Grazing Gazette with a mailing list of 9000 people, mostly producers. We prepared 169+ articles and news releases with many appearing in provincial, regional and local newspapers and newsletters. Topics ranged from seeding perennial forages to pasture rejuvenation, forage quality, extending the grazing season and grazing management.

We produced more than 20 extension and technical publications during the course of the project. GAPT publications were made available through the SAF's Publication Distribution Centre,

Rural Service Centres and the Regina and Saskatoon offices of GAPT. The publications were also displayed at many major fairs, exhibitions, conferences and local events. Many requests for our publications were received and filled. The high demand for our extension publications necessitated reprinting of:

(1) Re-grassing of farmland (three printings);
(2) Rejuvenation-Southern Saskatchewan (second printing);
(3) Field guide: Identification of common range plants of southern Saskatchewan (second edition, third printing);
(4) Bison Pastures and Grazing Management (second printing).

The most recent publications produced included:

(1) Livestock grazing and riparian areas: A literature review. 2001 (56 pages)
(2) Grazing and Pasture Technology Program: 1997-2001 Highlights (67 pages)
(3) Grazing and Pasture Technology Program: 1997-2001 Projects (134 pages)

We developed a computer program to assist producers select the land-use option(s) best suited to their own situation. The program is capable of comparing the returns from forage-based enterprises to annual cropping systems. We also participated with SAF's Extension Service in the development of a more producer friendly, menu-driven program called Land Use Planner.

We established and managed the Forage-rangeland Internet site of Agri-Carta. It now contains 240+ articles or publications, classified into 19 categories. We included all the articles from the Grazing Gazette issues produced in the last four years, other GAPT publications and some conference proceedings.

The Data-Gathering Component

This component identified and addressed many regional issues with focus on reducing input cost and improving the economic and ecological sustainability of our rangeland and pasture land resources. All field projects have been completed as planned. The project information obtained were used in presentations and articles whenever possible and appropriate. Several tours / field days were organized in conjunction with some of the projects. The value of the data gathering component in enhancing our extension efforts was evident throughout the Project duration. The data gathered provided relevant and region-specific basis for our presentations, publications and articles. This resulted in more contacts and greater interest in applying or at least considering the practices being addressed in our Project.

The work completed under this component was summarized in the following two documents (attached):

(1) Grazing and Pasture Technology Program: 1997-2001 Highlights ; and
(2) Grazing and Pasture Technology Program: 1997-2001 Projects (134 pages)

General Observations

The interest in seeding perennial forages grew steadily throughout the Project duration. Many producers expanded their forage base to increase their herds or to expand the grazing season. Many grain producers considered a gradual or complete shift to perennial forages for grazing, hay for off-farm sale or seed production. GAPT staff helped producers with questions related to forage economics, forage selection and seeding plans, and grazing management. There was a very strong demand for the publication: Re-grassing Farmland. Furthermore, GAPT staff provided technical help to producers wishing to set up grazing management systems.

During the past year, many questions were received regarding the conservation cover program announced last spring in the provincial budget. In recent months we started receiving questions concerning issues related to carbon sequestration, carbon credits and global warming.

All project activities were carried out in close cooperation and coordination with the Extension Service of Saskatchewan Agriculture and Food. The Project collaborated with the Research Centres of Agriculture and Agri-Food Canada and several other organizations. This collaboration allowed access to additional expertise and facilities as well as cost saving.

Our work showed that substantial reduction in livestock production input cost can be achieved through the employment of extended grazing season techniques such as swath grazing and stock-piled perennial forages. Selecting the proper pasture improvement option can save money and minimize adverse environmental impacts.

Recommendations for future rangeland and pasture extension programming were developed and presented to senior officials of stakeholder organization at a Project Wrap-up meeting held on March 30, 2001. The recommendations were based on consultations and brainstorming sessions with representatives of the stakeholder organizations (e.g. SAF, PFRA, SSGA, SFC, SERM, SWF, DUC, PCAP, SWCC).

The Project successfully achieved its objectives based on the performance indicators, event exit surveys, independent consultant interviews of representatives of stakeholder organizations, the popularity of our publications and events and the unsolicited feedback from producers.

TECHNICAL REPORT

1. Introduction

The Canada-Saskatchewan Agri-Food Innovation Fund (AFIF) approved the project entitled "Sustainable Forage Systems" as part of the "Sustainable Farming Systems" component. The project had two integrated objectives:

(a) to conduct a field testing and data gathering activity addressing important range/pasture issues and opportunities; and

(b) to deliver an Ecoregion-sensitive rangeland, pasture land and hay land extension program based on the best available information.

The project started April 1, 1997. Semi-annual and annual progress reports were produced throughout the course of the project. This document is the final report covering the entire project duration from April 1997 to April 2001.

The project was administered jointly by the Saskatchewan Stock Growers Association and the Extension Service Branch of Saskatchewan Agriculture and Food. The Saskatchewan Grazing and Pasture Technology Program (GAPT) implemented the Project under the directions of a steering committee with members representing the Provincial and Federal Agriculture Departments as well as non-governmental organizations. The staff and steering committee updates are provided in Appendices A & B.

2. Project Activities

The Extension Component

Planning and implementation of the Extension Component were carried out in close cooperation and coordination with the Extension Service of Saskatchewan Agriculture and Food. This included participation in the regional planning sessions of the SAF's Extension Branch.

Contacts

During the course of the project, individual producer consultations reached 7608 producers, including 1043 on-farm consultations. Major contact topics included economics of converting cropland from grain to forage-based enterprises, forage species and variety selection, forage seeding, seeding rates and mixtures, grazing management, and grazing systems. Other common topics include: pasture planning, stocking rates, potential hay productivity, plant identification, native seed harvest, extending the grazing season, pasture rejuvenation, use of annual cereals for forage, control of weeds in forages, and specialized livestock.

During the last year of the project, many questions were received regarding the planned provincial conservation cover program. We also received some producer inquiries concerning environmental issues such as carbon sequestration, carbon credits and global warming *and* its potential effects on rangeland and pasture resources.

We manned displays at more than 30 major exhibitions, conferences and annual producer group meetings, attracting more than 3000 producers (Appendix C).

Professional contacts totaled 6188. Most contacts related to project work and event planning. Many of the professional contacts were mad on behalf of producers. The main topics of such contacts related to stocking rates, forage mixtures, seeding rates, pasture rejuvenation options, and brush control.

Events

During the course of the project, we organized, sponsored and/or resourced 336 events with 11,805 participants. A list of selected events, together with the topics addressed, locations and the number of participants, is provided in Appendix D. The events included a large number of field days in the different parts of the province. Many events were conducted in conjunction with our field projects. The topics were selected on the basis of producer contacts and feedback as well as consultations with SAF's Extension staff. The events focused on forage selection and seeding, pasture management, pasture rejuvenation, extending the grazing season, riparian areas, specialized livestock grazing, role of forages in sustainable agriculture, native plant identification and native range management.

Publications

We published 11 issues of the Grazing Gazette. The Gazette was sent to a mailing list of 9000 subscribers, mainly producers. The Gazette included articles based on our own region-specific projects. Contributions from other organizations were also included.

We produced more than 20 extension and technical publications during the course of the project (Appendix E). GAPT publications were made available through the SAF's Publication Distribution Centre, Rural Service Centres and the Regina and Saskatoon offices of GAPT. The publications were also displayed at many major fairs, exhibitions, conferences and local events. Many requests for our publications were received and filled. The high demand for our extension publications necessitated reprinting of: (1) Re-grassing of farmland (three printings); (2) Rejuvenation-Southern Saskatchewan; (3) Bison Pastures and Grazing Management; and (4) Field guide: Identification of common range plants of southern Saskatchewan (third printing, second edition).

Two most recent publications produced included:
(4) Livestock grazing and riparian areas: A literature review (56 pages)
(5) Grazing and Pasture Technology Program: 1997-2001 Highlights (67 pages)
(6) Grazing and Pasture Technology Program: 1997-2001 Projects (134 pages)

Many articles have been prepared for publication in newspapers and newsletters. Several SAF Farm and Food Reports discussing our projects as well as current forage, pasture and range issues were produced. A total of 169 main articles were produced this year (Appendix F). The articles addressed many topics including grazing management, forage quality and forage value testing, native prairie, forage selection, forage establishment, grain to grass conversion and management-intensive grazing.

We developed a computer program called "Marginal Cropland Program" to assist producers select the land use option(s) best suited to their own situation. The program is capable of comparing the returns from forage-based enterprises to annual cropping systems. We also

participated with SAF's Extension Service in the development of a more producer friendly, menu-driven program called Land Use Planner. Many requests for the Marginal Cropland Program were received. The program was provided in the form of a diskette or forwarded by E Mail to the requesters. However, most of the requests came from professionals. We expect that more producers will be making use of the Land Use Planner.

The Internet
GAPT established and managed the "**Forage and Rangeland**" Internet site in cooperation with AgInfonet's AgriCarta. The site includes Grazing Gazette articles and GAPT publications from this and earlier phases of the Program. Some conference proceedings are also included. The site presently contains 245 articles and publications classified into 19 categories.

Other Media
Radio and television were also used to reach producers. Examples of topics addressed are given in Appendix G.

Staff Development
GAPT staff maintained professional development efforts, including participation in conferences, workshops and seminars, throughout the Project duration.

Inter-Institutional Co-operation
Most extension events were organized and implemented in close cooperation with SAF's Extension Service. GAPT also cooperated and collaborated with many other organizations including, Saskatchewan Wetland Conservation Corporation, PFRA, University of Saskatchewan, Saskatchewan Forage Council, Western Beef Development Center, Saskatchewan Prairie Conservation Action Plan, Native Plant Society of Saskatchewan, Saskatchewan Stock growers Association, Friends of the Grassland National Park, and Agriculture in the Classroom.

The Data-Gathering Component
We devoted a substantial proportion of our time to the data gathering and field testing activities and the ensuing project write-ups. We involved producers and researchers and rangeland-related organizations and agencies in the design and implementation of the data-gathering component. In particular, we worked closely with the Extension Service of Saskatchewan Agriculture and Food and Agriculture and Agri-Food Research Centers. All activities were within the priorities identified and outlined in the project application/contract. Each sub-activity was the responsibility of a rangeland specialist or the project manager.

Whenever possible and appropriate, the results of the above activities were made available to producers and other interested parties in the form of articles, extension publications, electronic files and/or presentations at various extension events.

Our work showed that substantial reduction in livestock production input cost can be achieved through the employment of extended grazing season techniques such as swath grazing and stock-piled perennial forages. Selecting the proper pasture improvement option can save money and minimize adverse environmental impacts.

We summarized the results of this component in the following two documents:
(1) Grazing and Pasture Technology Program: 1997-2001 Highlights (67 pages)
(2) Grazing and Pasture Technology Program: 1997-2001 Projects (134 pages)

3. Results and Conclusions
See attached documents:
(7) Grazing and Pasture Technology Program: 1997-2001, Highlights.
(8) Grazing and Pasture Technology Program: 1997-2001, Projects.

4. Indications for Future Development
Recommendations for future rangeland and pasture extension programming were developed and presented to senior officials of stakeholder organization at a Project Wrap-up meeting held on March 30, 2001. The recommendations were based on consultations and brain-storming sessions (November 1999 and March 2001) with representatives of the stakeholder organizations (e.g. SAF, PFRA, SSGA, SFC, SERM, SWF, DUC, PCAP, SWCC). Independent consultants facilitated the process. The consultant report outlining the recommendations has been e-mailed earlier to the project contact and other SAF and PFRA Managers. The recommendations were presented to a gathering of stakeholders on the evening of March 30. Copies of the discussion paper are also available from the SSGA office in Regina.

5. Performance Indicators
- Individual producer contacts: 7608, including 1043 field calls.
- Professional contacts: 6188 persons.
- Events: 336, participants: 11,805.
- Radio-TV spots / interviews: 70+
- Newspaper articles: 169+ articles and news releases.
- The Grazing Gazette: 11 issues (mailing list of 9000+)
- More than twenty technical and extension publications
- High demand for our publications
- The popularity of our extension events and the highly positive feedback from the participants.
- A "Forage and Rangeland Internet Site" was created and expanded to 242 items classified into 19 categories.

APPENDICIES

APPENDIX A

PROJECT STAFF

Program Manager: Zoheir Abouguendia (Assigned full time to project by SAF). Saskatoon.

Program Secretary/Book Keeper: Marilyn Phillips (part-time), Regina Head Office.

SW Rangeland Specialist: Bob Springer, Swift Current.

NW Rangeland Specialist: Dwayne Summach, Unity (2000-2001).

NW Rangeland Specialist; Brendan Kowalenko, Unity (1997-2000).

NW Rangeland Specialist: Todd Jorgenson (assigned part-time to project by SAF), Lloydminster.

SE Rangeland Specialist: Lorne Klein (assigned full time to project by SAF), Weyburn.

NE Rangeland Specialist: Al Foster (assigned full time to project by SAF), Tisdale.

EC Rangeland Specialist: Wally Vanin (assigned

APPENDIX B

PROJECT STEERING COMMITTEE

The following persons served recently on the Steering Committee of the program:

1) Lloyd Thompson (Saskatchewan Stock Growers Association, SSGA), Carnduff, Chairperson
2) Ed Anaka (Saskatchewan Forage Council, SFC), Canora, Vice-Chairperson
3) Bob Stewart (SSGA president), Rockglen, member
4) Barry Marquette, (SFC), Kelvington, member
5) Pat Hayes (rancher), Val Marie, member at large
6) Larry White (SAF), Prince Albert, member
7) Greg Haase (SAF), Regina, member
8) Brant Kirychuk (PFRA), Regina, member
9) Glen Shaw (PFRA), Saskatoon
10) Lynn Grant (rancher), Val Marie, member at large
11) Zoheir Abouguendia (Project Manager)
12) Marilyn Phillips (Recording Secretary)

APPENDIX C
SELECTED EVENTS ORGANIZED, SPONSORED AND/OR RESOURCED
April 1, 1997 – March 31, 2001

1997-98

1) Extending the grazing seasons seminar, Hudson Bay, April 7.
2) Pasture planning seminar, Biggar, April 3 (5 participants)
3) Swath grazing seminar, Luseland, April 11 (45 participants)
4) Grazing management seminar, Marsden, April 14 (12 participants)
5) Grazing management, Beef producer meeting, Prince Albert, June 25.
6) Field day (in cooperation with DU), June 13, Pocket Gopher Control (97 participants)
7) Field day, Val Marie, June 15, native range evaluation and management (10)
8) Field day/seminar(in cooperation with SAF), Tugaske, July 10, grazing management (14 participants)
9) Range and pasture evaluation and management, Pasture Managers Training (in cooperation with SAF), St. Walburg, July 16-17 (20+ participants)
10) Range and pasture evaluation and management, Pasture Managers Training (in cooperation with SAF), Weyburn, July 23-24 (25 participants)
11) Field day, Turtleford, July, pocket gopher control (3 participants)
12) Field day, N. Battleford area, July, pocket gopher control
13) Field day in conjunction with the Integrated Resource Management Group, Ceylon, July (16 producers)
14) Forages and pastures for bison, Bison production tour (in cooperation with SAF), Maple Creek, Aug. 6, (30 participants).
15) Native range plant identification and range evaluation Field day, Glentworth, Aug. 8, native plant identification and range evaluation (7 participants).
16) Range and pasture evaluation and management, Pasture Managers Training (in cooperation with SAF), Tisdale, August participants).
17) Forages and pastures for white-tailed deer, Mule Deer / White-tailed Deer Association Meeting, Warman, Aug. 23, (35 participants).
18) Four field tours of the annual ryegrass demonstration sites, at Spiritwood, Glaslyn, Turtleford and Meadow Lake, October 15-16 (16 producers).
19) Native range management, Southwest Management Club, Eastend, Oct. 6,
20) Grazing Club meeting, Old Wives, Oct. 30 (9 producers)
21) Fall grazing on crop residue tour, SE, Oct.
22) Native Plant Conference, Saskatoon, Oct. 5-7 (140 participants). Co-sponsored and co-organized with the Native Plant Society of Saskatchewan and other organizations. About 67% of the participants who returned the conference evaluation sheets gave an overall conference rating of good to excellent.
23) Nutrient content of native plants, 1997 Beef Symposium, Saskatoon, Nov. (About 200 people).
24) Grazing management, Sheep Development Seminar, Swift Current, Nov. 8 (35 participants).
25) Forage production options, Profit/ Loss in 1998, Moose Jaw, Nov. 13 (100 participants)
26) Extended grazing seasons presentation/tour with PA Extension Agrologist, Prince Albert, Nov, (28 producers)
27) Range planning, Old Wives Grazing Club, Nov. 19 (5 producers)

28) Presentation on GAPT activities and projects, Tisdale, Nov. (50 producers).
29) Fall/winter feeding options, SE, Nov. (13 participants) .
30) Forage species selection, Estevan, Dec. 1. This was part of a seminar series co-organized and co-sponsored with SAF's Extension. 74% of producers who completed the evaluation survey found the seminar useful to very useful. (58 producers)
31) Forage species selection, Filmore, Dec. 2 (see note under #30) (75 producers)
32) Forage species selection, Fort Que'Appelle, Dec. 3 (see note under # 30) (41 producers)
33) Forage selection, Pangman, Dec. 11 (20 producers)
34) Planning for change and plant species selection presentations made at the "Going Grass" conference co-organized and co-sponsored with SAF and SPARC, Swift Current, Dec. 10-11 (190 producers).
35) Forage balance calculations, Old Wives Grazing Co-op, Dec. 17 (6 producers).
36) Rejuvenation and grazing management, Beausejour, Dec. 1-2 (60 producers).
37) Forage selection for problem soils, Nipawin, Dec. (40 producers).
38) Regional Beef Seminar, Tisdale, Jan. 28, 1998 (60 producers). This was co-organized and co-sponsored with SAF.
39) Alfalfa opportunity meeting, NE, Jan. 1998. GAPT co-organized. (60 producers)
40) Forage species selction, Preeceville, Jan. 22, 1998 (40 producers).
41) GAPT projects, a presentation at the Saskatchewan Forage Council Annual Meeting, Saskatoon, Jan. 15, 1998 (40 participants).
42) Forage trends, Cut Knife, Jan. 28, 1998 (28 producers).
43) Swath grazing, Biggar, Jan. 14, 1998 (30 producers)
44) Swath grazing, North Battleford, Jan. 27, 1998 (33 producers). This was part of the Regional Beef Seminar.
45) Bison pastures, Prince Albert, Jan. 27, 1998 (50 producers).
46) Bison pastures. North Battleford, Jan. 28, 1998 (60 producers).
47) Swath grazing field day, Gull Lake, Jan. 21, 1998 (25 producers).
48) Swath grazing, Yorkton, Jan. 29, 1998. This was delivered by one of our cooperators as part of a Regional Beef Seminar, co-sponsored by GAPT.
49) Economics of cropping versus forages and forage selection presentations, Rabbit Lake, Feb. 5, 1998 (33 producers).
50) Economics of tame pasture grazing, Colonsay, Feb. 13, 1998 (22 producers).
51) Economics of cropping versus forages and forage selection, Glaslyn, Feb. 18 (36 producers).
52) Timothy production, Preeceville, Feb. 5, 1998 (total for series 43).
53) Timothy production, Kamsak, Feb. 5, 1998 (attendance included under # 52).
54) Fall grazing options, Kelvington, Feb. 10, 1998 (total for series 48).
55) Fall grazing options, Carrot River, Feb. 10 (attendance included under # 54).
56) GAPT projects, Whitefox, Feb. 16 (10 producers).
57) Pasture management for Elk, Kenosee, Feb. 5 (75 producers).
58) Pasture management for Elk, Tisdale, Feb. 6 (50 producers).
59) Pasture management for Bison, Weyburn, Feb. 18 (70 producers).
60) Nutrient content of native range plants, Shaunavon, Feb. 9 (30 producers).
61) Nutrient content of native range plants, Mankota, Feb. 17 (33 producers).
62) Grazing systems, Old Wives Grazing Club, Feb. 25 (5 producers).

63) Range plant identification and species selection: presentations made at the "Native Plant School" co-organized and co-sponsored by GAPT, Native Plant Society of Saskatchewan and other organizations, Regina, Feb. 7-8 (85 participants).
64) Native plant opportunities, Moose Jaw, Feb. 26 (23 participants).
65) Forage species selection and economics of pasture production, Humboldt, March 4 (12 producers).
66) Pasture selection and management for Elk, Colonsay, March 5 (12 producers)
67) GAPT projects and activities, Gull Lake, March 30.
68) Rangeland condition assessment techniques: a presentation at "Grazing and Biodiversity Workshop" organized by PFRA and CWS, Regina, march 24-25 (45 participants).
69) Present and future range monitoring techniques, SAF's Lands Branch Meeting, Saskatoon, March 27 (25 participants).

1998-99

70) Extending the grazing seasons seminar, Hudson Bay, April 7.
71) Pasture planning seminar, Biggar, April 3 (5 participants)
72) Swath grazing seminar, Luseland, April 11 (45 participants)
73) Grazing management seminar, Marsden, April 14 (12 participants)
74) Grazing management, Beef producer meeting, Prince Albert, June 25.
75) Field day (in cooperation with DU), June 13, Pocket Gopher Control (97 participants)
76) Field day, Val Marie, June 15, native range evaluation and management (10)
77) Field day/seminar(in cooperation with SAF), Tugaske, July 10, grazing management (14 participants)
78) Range and pasture evaluation and management, Pasture Managers Training (in cooperation with SAF), St. Walburg, July 16-17 (20+ participants)
79) Range and pasture evaluation and management, Pasture Managers Training (in cooperation with SAF), Weyburn, July 23-24 (25 participants)
80) Field day, Turtleford, July, pocket gopher control (3 participants)
81) Field day, N. Battleford area, July, pocket gopher control
82) Field day in conjunction with the Integrated Resource Management Group, Ceylon, July (16 producers)
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67% of the participants who returned the conference evaluation sheets gave an overall conference rating of good to excellent.

92) Nutrient content of native plants, 1997 Beef Symposium, Saskatoon, Nov. (About 200 people).

93) Grazing management, Sheep Development Seminar, Swift Current, Nov. 8 (35 participants).

94) Forage production options, Profit/ Loss in 1998, Moose Jaw, Nov. 13 (100 participants)

95) Extended grazing seasons presentation/tour with PA Extension Agrologist, Prince Albert, Nov, (28 producers)

96) Range planning, Old Wives Grazing Club, Nov. 19 (5 producers)

97) Presentation on GAPT activities and projects, Tisdale, Nov. (50 producers).

98) Fall/winter feeding options, SE, Nov. (13 participants) .

99) Forage species selection, Estevan, Dec. 1. This was part of a seminar series co-organized and co-sponsored with SAF's Extension. 74% of producers who completed the evaluation survey found the seminar useful to very useful. (58 producers)

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106) Forage selection for problem soils, Nipawin, Dec. (40 producers).

107) Regional Beef Seminar, Tisdale, Jan. 28, 1998 (60 producers). This was co-organized and co-sponsored with SAF.

108) Alfalfa opportunity meeting, NE, Jan. 1998. GAPT co-organized. (60 producers)

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136) GAPT projects and activities, Gull Lake, March 30.
137) Rangeland condition assessment techniques: a presentation at "Grazing and Biodiversity Workshop" organized by PFRA and CWS, Regina, march 24-25 (45 participants).
138) Present and future range monitoring techniques, SAF's Lands Branch Meeting, Saskatoon, March 27 (25 participants).

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139) Grazing Mixedwood Forest: a presentation Rice Lake, Mb., and Ste. Rose, Mb., April 6, 1999 (50).
140) Discussions with members of the Northeast Forage Association to strengthen their organization, Nipawin, April 21 (10).
141) Grazing management presentation and field plant ID session, Nikaneet First Nation Range Day, Maple Creek area, May 25 (10).
142) Range soils and plants: a presentation and a field day, Grade 6 students in cooperation with Ducks Unlimited Greenwing Field Day in North Battleford, June 11, (60 students).
143) A multi-site (Edgerton. Hughenden, and Provost, Alberta areas) bus tour, grazing management and other forage aspects, in cooperation with West 21 Forage Producers Inc., June22, (40).
144) Grazing management: field day, in cooperation with extension agrologist, Tom Wood's Farm, Glaslyn, June 23, (130).
145) Discussion meeting with members of the Colonsay Forage Club for organizational and promotional purposes of the club, June 1 & 15, (10).
146) Hay and grazing: 3 presentations at Preeceville Hay Days, June 16 (60).
147) Annual ryegrass: presentation at the Forage/Beef Network Meeting in Saskatoon, June 9 (60).
148) Pasture rejuvenation: a presentation at the Termuende Field day, June 24, (250).
149) Agriculture and ecology can co-exist in Saskatchewan: a presentation in cooperation with Extension agrologist, Moose Jaw elementary school, June 9, (15 students).
150) Range Management: Past and Present: a presentation at the "Romancing the Prairie" Meeting, Cypress Hills, June 14 (100+ participants).
151) Native range plant identification: presentation and field day, Cypress Hills, June 15 (30).

152) Winter grazing of native rangeland: a presentation at the 5th Western Forage and Beef Network Meeting, June 9 (60).

153) Plant identification: field workshop,Tramping Lake Regional Park, July 19 (6).

154) Brendan spoke on annual forages for silage and greenfeed at the Prairie Agricultural Research Site field day in Kindersley, July 22, (40 producers).

155) Forage selection and native plant identification: field Day in cooperation with Extension Agrologist, Loverna and Mantario, July 27 (4 producers).

156) Forage selection and weed control: presentations at the Forage Performance Tour in cooperation with Extension, Prairie Seeds & Proven Seeds, July 28, (24).

157) Forage species and variety selection: a presentation at the Focusing on Forages Field Day, Rabbit Lake Short Season Agronomy Site, July 29 (22).

158) Legume Nodulation: a field workshop for agrologists, organized in cooperation with Agriculture and Agri-Food canada, Swift Current, July 7 (10).

159) Forage species and varieties: a field tour with Extension Agrologist, Fox Valley Forage Variety Demonstration Plot, July 20 (5).

160) Forage selection: a presentation at the Seager Wheeler Farm forage field day, Rosthern, organized in coooperation with Extension (12).

161) Timothy for export field day, Saltcoats, July 9 (30).

162) Riparian area management: a presentation and a field workshop organized by SAF, Loon Lake, July 14 (9).

163) Riparian area management and plant identification: a field day south of Bethune, July 27, organized in co-operation with SAF's Extension Districts, NPSS, and DU (19).

164) Native range: a field day, Swift Current area, August 9 (8).

165) Hayland Renovation: a project tour and native range field day at Tom Hodgson's Ranch, August 11 (2).

166) Prickly pear cactus control: A project tour and native range field day, MacGarrett's Ranch, August 16 (8).

167) Native range: a field day and a presentation on leafy spurge control, Gary Munford's, August 17 (17).

168) White-tailed deer pastures: a presentation at field day organized by Sask. White-tailed and Mule Deer Producers Association, Melfort, August 7 (50).

169) Native range and riparian areas, field day in cooperation with Sask. Wetland Conservation Corp., Lisieux, August 10 (25).

170) Native range and riparian area management: presentations at the SRM's Range Youth Camp, south of Saskatoon, Sept. 11-12, (8).

171) Riparian field trip in conjunction with rangeland management class from U of S, Beaver Creek, Oct. 14 (26 participants).

172) Presentation on the swath grazing project at the Beef Symposium, Saskatoon, Nov. 17 (120+ producers).

173) Presentation on Forage Selection and Forage Rejuvenation at SAF's Extension meeting at Meadow Lake, Nov. 30 (20 producers)

174) A presentation on GAPT's projects at the West-Central Region Agrologists meeting, Nov.22, Saskatoon (12).

175) A presentation on Effect of Seeding Date on Quality and Yield of Swath Grazed Annuals at the Beef Symposium, Saskatoon, Nov. 17 (120+ producers).

176) A presentation at Newfield Seeds Dealer Meeting, Nov. 30

177) Eastend FLAG Club meeting, Nov.23 and the Elrose FLAG Club meeting Nov. 30 (9 producers).

178) A presentation on GAPT and management intensive grazing (MIG) at SWP meeting in Killdeer, Dec. 7 (6 producers).

179) Introductory FLAG Club meeting at Consul, Dec. 6 (9 producers) and Tompkins, Dec. 6 (10 producers).

180) Swath Grazing Field Day at Gravelbourg, Dec. 15 (14 producers).

181) A presentation on MIG at the Eastend FLAG Club meeting, Dec. 17 (9 producers).

182) A presentation on forage selection and rejuvenation at producer meeting in Neilburg, Dec. 1 (17 producers).

183) A presentation on forage selection and rejuvenation at producer meeting in Turtleford, Dec. 2 (12 producers).

184) A presentation on forage selection and rejuvenation at producer meeting in Mayfair, Dec. 6 (23 producers).

185) A presentation on forage selection and rejuvenation at producer meeting in Canwood, Dec. 14 (15 producers).

186) Information and planning meeting with the West 21 Forage Producers at Senlac, Dec. 16., (14 producers).

187) A presentation on Extending the grazing season at the Manitoba Grazing School, Brandon, Dec. 7-8, (240 participants).

188) A presentation on grazing plan development and extending the grazing season at Preeceville, Dec.6 (33 participants).

189) A presentation on grazing management planning at Pelly, Dec 7, (22 producers).

190) A presentation on grazing management planning at Wroxton, Dec. 17 (17 producers).

191) The Western Canadian Forage and Grazing Conference took place Dec. 8-10. Attendance was about 350 mostly Saskatchewan producers.

192) A presentation on grazing stock-piled perennial forages at the Western Beef Development Centre, Cow-Calf School, January 13, 2000, Saskatoon (35 producers).

193) A presentation on grazing mixed-wood forest and the GAPT clipping projects at the Sask. Forage Council meeting, January 20, Meadow Lake (35+producers).

194) A presentation on forage selection at SAF forage seminar, January 24, Rosetown (12 producers).

195) A presentation on Evaluating your Grazing Program and Extending your Grazing Season at Kelvington, January 6 (60 producers).

196) A presentation on Evaluating your Grazing Program and Extending your Grazing Season at Simpson - January 13 (18 producers).

197) A presentation on Evaluating your Grazing Program and Extending your Grazing Season at Lanigan - January 18 (37 producers).

198) A presentation on Evaluating your Grazing Program and Extending your Grazing Season at Norquay - January 18 (16 producers).

199) A presentation to the Sask. Wheat Pool Livestock Committee meeting on GAPT projects Tisdale, January 12 (9 producers).

200) Forage production meeting at Prince Albert, January 19, (43 producers).

201) Forage production meeting, Nipawin, in association with the NE Forage Association annual meeting. January 20, (27 producers).

202) A presentation on Economics of Swath Grazing at WBDC Cow/calf school, January 13,2000, Saskatoon. (25 producers 5 professionals).

203) A presentation on forage species selection at Forage and Pasture Meeting, Redvers, January 26 (65 producers).

204) A presentation on Feeds and Minerals at the Elrose Flag Club Meeting, Jan. 6 (17 producers).

205) A presentation on Back-grounding feedlot at the Consul Flag Club Meeting, Jan. 10 (24 producers).

206) A presentation on Grazing Systems at the Forage & Livestock Seminar in Chaplin, Jan. 11 (20 producers).

207) A presentation on Economics of Grass vs. Grain at the Eastend Flag Club Meeting, Jan. 21 (14 producers).

208) A Swath Grazing Field Day at Russell Schreiners, SW, Jan. 27 (12 producers).

209) A poster paper on his Range Monitoring for Ranchers Program at the Western Range Science Seminar in Lethbridge, Jan. 23-25 (350 participants).

210) A presentation on rangeland inventory and balancing forage supply and demand, Western Beef Development's Cow Calf School, Saskatoon, Jan. 12 (35 participants).

211) Three presentations at the youth component of the Saskatchewan Livestock Association annual meeting, Regina, Jan. 22 (60 participants, adults and youth).

212) A presentation on 'Roles for Forages and Grazing Systems in Northwest Saskatchewan' in Turtleford, February 3 (8 members of the Turtleford Marketing Club).

213) Co-organized, co- sponsored and co-implemented the Foraging into the Future Conference, Swift Current, Feb. 2-3 (160 producers). Other partners were SAF and AAFC.

214) A presentations on Livestock Water Development at Consul & Tompkins, Feb. 7 (34 producers).

215) A presentations on Livestock Water Development at Elrose FLAG club meeting, Feb. 10 (15 producers)

216) A presentations on Livestock Water Development at Eastend FLAG club meeting, Feb.18 (14 producers).

217) A presentations on Livestock Water Development at Old Wives FLAG club meeting, Feb.17 (5 producers).

218) A presentation on Grazing Systems at Kyle SWP Committee Livestock Seminar Feb.15 (10 producers).

219) A presentations on Species Selection, Establishment, Seed Purity, and Quality at Shaunavon SWP staff forage seminar, Feb. 22 (6 staff members).

220) Timothy for Export Meeting in Tisdale, Feb. 5 (40 producers).

221) Elk Seminar at Kenosee Lake, Feb. 1.

222) A presentation on Species Selection, Pasture Management, Rotational Grazing, and Fertilizing to Dysart Marketing Club, Feb. 16 (11 producers).

223) A presentations on White-Tailed Deer Pastures and Management at Provincial White-Tailed Deer Seminars – North Battleford and Melfort, Feb. 25 & 26 (65 producers).

224) A presentation on Extending the Grazing Season at Pilot Mound and Austin, Manitoba, Feb 10 & 11 (100 producers).

225) A presentation on forage selection at the Lucky Lake forage seminar organized jointly with Extension District (20).

226) Chaired the forage session at the U of S Soils and Crops Workshop, Feb. 24.

227) A presentation on grazing management of riparian areas in relation to water quality at the U of S Soils and Crops Workshop, Feb. 25 (35 people).
228) Sponsored Native Plant Society Annual Meeting, Feb 4-5.
229) Elrose FLAG Club Meeting, Gallager Fencing spoke on electric fencing, March 2 (14 producers).
230) Consul and Tompkins FLAG Club Meetings (27 producers).
231) Presentations on the Cow-calf Production Project at Old Wives FLAG Club Meeting, March 15 (7 producers).
232) Eastend FLAG Club Meeting, Mar 17, (10 producers).
233) Northstar Seed Ltd. Open House at T4 Ranches, Carnduff, March 8 (30 producers).
234) A presentation on species selection, Pasture management, pocket gopher control at Forage Meeting, Montmarte, March 28 (22 participants).
235) A presentation on species selection, Pasture management, pocket gopher control at Forage Meeting, Estevan, March 29 (23 participants)..
236) A joint presentation with Bob Adamson on Timothy Hay Production, Humboldt, March 1 (12 producers).
237) Al resourced Forage Seed Production meeting, Humboldt and spoke on forage seed crop planners, March 2 (40 producers).
238) A presentation on forage selection, Forage Production Meeting, Wadena, March 2 (60 producers).
239) A presentation on forage adaptation, Newfield Seeds Producer meeting, Nipawin, March 14 (90 producers).
240) A presentation on forage selection and establishment, and greenfeed project at Kindersley Forage Seminar organized by Patty Robershaw, SAF, March 3 (33 producers).
241) A presentation on forage selection and rejuvenation at SAF Seminars, Pierceland, March 6 (10 producers).
242) A presentation on forage selection and rejuvenation at SAF Seminars, Unity, March 7 (27 producers).
243) Presentations on forage selection, swath grazing, forage fertilization, and greenfeed varieties at SAF Seminar, Sonningdale, March 14 (6 producers).
244) A presentation on Annuals for Forage and Grazing at SAF Forage Seminar, Saskatoon, March 20 (50 producers).
245) Presentations on forage species selection and grazing management at Kenaston, March 7 (14 participants).
246) Presentations on forage species selection and grazing management Holdfast, March 8 (12 participants).
247) A presentation on forage species selection and seeding rates at SAF's Forage and Grazing Seminar, Saskatoon, March 20 (50 participants).

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248) A presentation on Forage Selection at Battleford Co-op meeting on April 5, (5 producers).
249) A presentation on GAPT activities, at the RM of White Valley Ratepayer's Supper in Eastend on May 29 (50 producers).
250) Resourced a native field day for Crown Lands.

251) A presentation on grazing management of native pasture and plant identification at SWCC field day at Denzil/Neilburg, June 1 (11 producers).
252) Organized and hosted a tour of West 21 Grazing Project at Senlac on June 21 (25 producers).
253) Co-hosted a native pasture management field day with SWCC and SAF at Blaine Lake, June 27 (30 producers).
254) Co-hosted pasture management field day with SWCC and SAF at Biggar on June 28 (22 producers).
255) Initiated, co-organized and lead a Forage Field Day in Killdeer area, June 8 (12 producers).
256) Initiated, co-organized and lead a Forage & Livestock Water Field Day in Kyle/Elrose area, June 14 (22 producers).
257) Initiated, co-organized and lead a Forage & Livestock Water Field Day in the Old Wives/Mortlach area, June 15 (9 producers).
258) Attended and helped resource forage field days at Richmound and Cypress Lake.
259) Initiated, co-organized and lead a Forage & Livestock Water Field Day in the Eatonia/Mantario area, June 27 (12 producers).
260) A presentation at the SSGA Annual meeting and Convention, Moose Jaw, on GAPT progress and discussed examples of project results. June (150 attended).
261) A presentation on GAPT progress at SAF's Extension Management Meeting, Good Spirit Lake, June 8 & 9.
262) Organized and resourced a forage production field day at the Dale Pocock Farm at Nipawin, June 28 (10 participants).
263) Co-organized and attended the Society for Range Management Annual Meeting at Watrous on June 14 & 15 (27 participants).
264) Held a Pasture Field Day at Redvers, June 26 (45 producers).
265) Resourced a forage field day of the Meacham Hills Forage/Beef Club near Meacham on July 11th, (40 participants).
266) Resourced an evening field day at the Seager Wheeler Farm at Rostherm, July 18th, (3 participants).
267) Oganized and resourced a field day at Pathlow in co-ooperation with the WBDC on July 20th, (13 participants).
268) Organized and made a presentation on Native and Seeded Pasture Management at Dysart Marketing Club, July 19, (15 participants).
269) Initiated, co-organized and lead a Forage & Livestock Water Field Day, August 3 Eastend Area (23 participants).
270) Initiated, co-organized and co-lead a Forage & Livestock Water Field Day, August 10 Swift Current area. (31 participants).
271) Resourced the Pathlow site of a Sod Seeded Annual Crops field day, August 11, (6 participants).
272) A forage update to the West-Central Region Agrologists, Saskatoon, October 26
273) Participated in the West Central Grazing Club electric fencing field day
274) Presentation at SAF's Beef Opportunity Area Team meeting, Saskatoon, October 18
275) Presentation on Forage Production Opportunities at the Forge Opportunity Meeting, Lake Lenore, November 27 (12 producers)

276) Presentation on GAPT activities and project results at the AFIF Conference, November 7 – 8 (30 participants)
277) Resourced a Fall Grazing Field Day at the Ray Gautheir farm, Duck Lake, December 7 (8 producers)
278) Presentation on Native and Seeded Pasture Management to the Golden West Cattle Co-op Corning, December 5 (40 producers)
279) Presentation on Elk and Bison Pastures and Production, and Pasture Improvement Options at the Exploring Sustainable Alternatives Conference, Humboldt, December 9-10 (180 producers)
280) Presentation on the role of forages in sustainable agriculture at the Exploring Sustainable Alternative Conference, Humboldt, December 9-10 (180 producers)
281) Presentation on forage and cattle production at an organic farming workshop in Estevan, January 12 (18 producers)
282) Presentation on perennial forage species selection at the Weyburn Hay and Forage Workshop, January 25 (115 producers)
283) Co-organized and chaired a session of the Canadian Forage and Turfseed Conference in Saskatoon, January 18-20 (170 participants)
284) Co-organized the GAPT and Prairie Seeds information meeting meetings in Herschel and Milden, January 24-25 (45 producers)
285) Presentation on Extending the Grazing Season at the Yorkton Grazing Seminar, February 1 (130 producers)
286) Presentation on Extending the Grazing Season at the Saskatoon Cattle Congress, February 3 (30 producers)
287) Presentation on Elk pasture and forage requirements at the Swiftr Current Pioneer Co-op Forage/Garss meeting, February 8
288) Presentation on Annual Greenfeed Trial, Perennial Forage Stockpile Project, and Swath Graze Trial at the Quality Starts Here meeting in Moosomin, February 15 (15 producers)
289) Organized and resourced the advanced Grazing Management Workshop, Saskatoon, February 20-21 (180 producers)
290) Presentation on problem plants in pasture and hay lands at a Quality Starts Here meeting in Melfort, February 13 (50 attendees)
291) Organized three district meetings on forage seed production: Tisdale (20 producers), Prince Albert (20 producers) Humboldt (7 producers)
292) Presentation on Forage Seed Quality, Species Selection and Weed Control at the Tugaske Coop Producer meeting, February 6
293) Presentation on Forage Seed Quality at the Pioneer Coop Producer meeting, Swift Current, February 8
294) Presentation on Forage Seed Quality at a Quality Starts Here producers meeting, Swift Current, February 16
295) A presentation at SWCC Prairie Workshop - Shrub control with goats and fire, pasture management, March 6 (32 producers)
296) A presentation on Perennial Forage Species Selection in Yorkton, March 27
297) A presentation on Forage Selection at the Saskatoon Forage Meeting , March 14 (85 producers)
298) Organized and chaired the Pasture and Forage update, Tisdale, March 28 (60 producers)

APPENDIX D
EXAMPLES OF DISPLAY OPPORTUNITIES

GAPT main display or regional displays were set up and manned at a number of fairs, exhibitions, conferences and annual meetings throughout the province. Examples are given below.

April 1, 1997 - March 31, 1998

- Agri-Mex, North Battleford, April 5, 1997.
- SSGA Annual Meeting and Convention, Kindersley, June 8-10 (35+ individuals visited for
- detailed inquiries and information).
- Unity Fall Fair, Unity, Oct. 3-4 (20 visitors).
- Edam Fall Fair, Edam, Oct.
- Native Plant Conference, Saskatoon, Oct. 5-7.
- Mexibition, Saskatoon, Nov. 19-22 (170 visitors).
- Agribition, Regina, Nov. 23-30 (267 visitors).
- Going Grass Conference, Swift Current, Dec. 10-11.
- Forage Council Annual Meeting, Saskatoon, Jan. 15, 1998.
- Regional Beef Seminar, Tisdale, Jan.
- Cattlemen's Corral - Crop Vision, Lloydminster, Jan. (55 visitors)
- Beef Seminar, McCord, Jan. (20 visitors).
- Native Plant School, Regina, Feb. 7-8.
- Pairie Conservation and Endangered Species Conference, Saskatoon, Feb. 19-22.
- Spring Rate Payers' Meeting, RM of Gull Lake, March 30.
- PA Farm Fair, Prince Albert, March 18-19 (25 visitors).
- John Deer Days, Weyburn, March 13 (30 visitors)
- Elk Breeders Association Convention, Saskatoon, March 27-28 (30 visitors)

April 1, 1998 – March 31, 2000

- SSGA Convention and Annual Meeting, Moose Jaw, June 14-16.
- Grand opening of the Western Beef Development Centre, Termuende, Sept. 24.
- Mexabition, Nov. 18-21., Sasktoon (106 visitors).
- Agribition, Nov. 22-29, Regina (149).
- Profiting with Grass Conference, Saskatoon, Nov. 2-3 (potential visitors:228).
- Native Plant Society Annual Meeting in Saskatoon, Feb. 12, (80 participants).
- High-profit cow-calf workshop, Saskatoon, Feb. 22-23 (potential visitors 60+).
- Saskatchewan Forage Council Annual Meeting.
- Prince Albert Farm Fair on March 17 and 18, (37 visitors).

April 1, 2000 – March 31, 2001

- Saskatchewan Stock Growers Association Annual Meeting, Moose Jaw, June (150 attendees)
- Saskatoon Fall Fair, November 15-18 (100 producers)
- Canadian Western Agribition, Regina, SK November 20-25 (150 producers)
- Exploring Sustainable Alternative Conference, Humboldt, December 8-9 (180 producers)
- Climate Change Conference, Saskatoon, December 11-12 (150 producers)
- Cattleman's Corral, Lloydminster, January 16-17 (60 producers contacted)

- Prince Albert Fair, March 2001 (40 producers contacted)
- Saskatchewan grazing management workshop, Saskatoon, February 20, 2001 (180 potential viewers)

APPENDIX E
SELECTED GAPT PUBLICATIONS
(arranged in descending order of publication date)

Grazing and Pasture Technology program: 1997-2001 Highlights. 67 pages. Grazing and Pasture Technology Program. 2001. 67 pp.

Grazing and Pasture Technology program: 1997-2001 Projects. 134 pp. Grazing and Pasture Technology Program. 2001. 134 pp.

Portable windbreak fences. Grazing and Pasture Technology Program. 2001. 8 pp.

Livestock grazing and riparian areas: A literature review. Grazing and Pasture Technology Program. 2001. 56 pp.

Relationship between plant species diversity and grassland condition. Journal of Range Management 2001 (54: 177-183). Society for Range Management, Colorado, US.

Re-grassing farmland: A practical guide to selecting the right forage species. 2000 (second edition). Grazing and Pasture Technology program. 39 pp. (reprinted in 2001).

Field guide: Identification of common riparian plants of Saskatchewan. Grazing and Pasture Technology Program. 2000. 41 pp.

Healthy watersheds, healthy grazing-land resources. Grazing and Pasture technology Program. 2000. 12 pp.

Winter-feeding options for maintaining healthy riparian areas and water quality. Grazing and Pasture Technology program. 2000. 4 pp.

Grazing management practices for riparian areas. Grazing and Pasture technology program. 2000. 14 pp.

Re-grassing farmland: A practical guide to selecting the right forage species. 2000. Grazing and Pasture Technology program. 39 pp.

Pasture and forage for white-tailed deer. Grazing and Pasture Technology program. 1999. 12 pp.

Rejuvenation of tame forages: Southern Saskatchewan. Grazing and Pasture Technology program. 1999. 25 pp.

Ranching for conservation and profit. Producer experiences. Grazing and Pasture Technology Program. 1999. 57 pp.

Re-grassing farmland: A practical guide to selecting the right forage species. 1999. Grazing and Pasture Technology program. 39 pp.

Effect of grazing on plant species diversity of grasslands in Saskatchewan. P. 210-218. Natural History Occasional Paper No. 24. 1999. The Provincial Museum of Alberta.

An introduction to swath grazing in Western Canada. Prepared by Alberta Agriculture in cooperation with Grazing and Pasture technology program and Agriculture and Food Canada. 1998. 16 pp.

Bison pastures and grazing management. Grazing and Pasture Technology Program. 1998. 12 pp.

Nutrient content and digestibility of Saskatchewan range plants. Grazing and Pasture Technology Program. 1998. 24 pp.

Nutrient content and digestibility of Saskatchewan range plants. Final Report on ADF Project #94000114. Grazing and Pasture Technology Program. 1998. 67 pp.

The effects of livestock grazing on ecosystems and wildlife in the parkland region of Saskatchewan: A literature review. Grazing and Pasture Technology Program. 64pp.

Pasture and forages for wapiti. Grazing and Pasture Technology Program. 1997. 12 pp.

GRAZING GAZETTE

Eleven issues of the Grazing Gazette were published during the course of the program. The Gazette was mailed to 9000 people, mostly producers.

APPENDIX F
A LIST OF MAIN ARTICLES

- An article on nutrient content of native range plants In relation to cattle requirements
- An article on conversion of marginal cropland to perennial forages in cooperation with Bonnie Stephenson for the GraiNews (Cattleman's Corner, May 12, 1998).
- An article on grazing annuals for the Farm & Food Report.
- An article on herbicide residues in forages for NE regional newspapers.
- An interview on extending the grazing for the Western Beef Development Center Newsletter (WBDC)
- An article on swath grazing published in the Canadian Cattlemen Magazine, Page 20, June-July, 1998.
- An article on stock poisoning plants for SW regional newspapers.
- An article on forage mixtures was provided to the NW regional newspapers and agrologists.
- An article on forage supply needs in relation to future beef production for the NW regional newspapers and Extension staff.
- An article on the West 21 Forage Association grazing management project was submitted to local papers..
- An article on annual crops for forage in cooperation with SAF's Extension, NW-WC Regions.
- An article on range monitoring for ranchers prepared and distributed to the regional newspapers in the SW.
- An article on hay quality for the Northeast Extension newsletter.
- An article on grazing management in riparian habitats
- An overview of GAPT progress during the 1997-98, Proceedings of the SSGA Annual Meeting/Convention.
- An article on livestock watering systems for SAF's NW newsletter.
- An articles on native seed harvesting for NW regional newspapers.
- An article on pocket gopher control in pastures for NW regional newspapers.
- An information package on timothy production for NE Extension Agrologists.
- An article on deferred grazing systems for native pasture for NW newspapers and agrologists.
- An article on hay moisture testing for the Kelvington Extension District Newsletter.
- An article on the nutrient content project for the Society of Range Management Section Newsletter: The Plainsman.
- A Farm & Food Report on the Nutrient Content Project was prepared with the help of SAF's Communications. The report was published in several papers, including the Western Producer.
- An article entitled "coping with drought" was prepared for the September issue of the SSGA Magazine.
- An article on grazing management for bison was sent to NW newspapers and agrologists.
- An article on the Bison Grazing Publication was prepared for the NW regional newspapers.
- An article on the GAPT Program for the September, 1998 issue of Stockgrowers Magazine.
- An overview of the nutrient content results, Saskatchewan Forage Council Newsletter.
- An article on tame forage species selection for newspaper.
- An article on Cow Calf workshop and regional beef seminar.
- Low-cost Cow-calf, a Farm and Food Report.
- Analysis with Marginal Land Spreadsheet comparing grain vs. Forage.

- A paper (in cooperation with Drs. Willms and Freeze, Ag Canada) to be presented at the 1999 International Rangeland Congress.
- A manuscript on Plant Species Diversity submitted for publication in the Journal of Range Management.
- An article on Annual crops to perennial forages-some things to consider, for newspaper.
- An article based on Dave Pratt's "Ranching for Profit".
- An article on forage seed production - economics and marketing considerations.
- An article on the burdock control with sheep project for the Farm & Food Report.
- An article on Bob Siemen's operation (grain to forages) for local papers, November 13.
- An article on native prairie grazing, interviewed by the Leader Post and Star Phoenix, appeared in both papers in Nov., 98.
- An article on considerations for shifting grainland to grazing and provided a brief summary of the swath grazing project.
- An article on the defoliation project.
- An article on Agri-Carta's Range and forage module which is managed by GAPT, for Farm and Food Report.
- An article on grazing plan considerations for the 1999 grazing season for the SAF NW regional newsletter in April.
- A Farm & Food Report on quack grass.
- A newspaper article on extending the grazing season, summarizing swath grazing project in the southwest.
- Two newsletters to the members of the West 21 Forage Association discussing progress and future plan for the grazing management project.
- A poster for the Soils and Crops workshop in Saskatoon on Effects of Fertilizing quack grass in co-operation with Dr. Mahli, AAFC.
- General rules for grazing native rangeland and seeded pastures, SE newspapers.
- Rotational grazing, SW newspapers.Tame forage species selection guidelines. An article for use by staff of SW forage seed companies.
- Forage seeding, NE newspapers.
- Forage seed budgets. An articel circulated to E.A's.
- Fertilizing forages and seeding cover crops. Newspaper and newsletter article.
- Seeding forages, SE newspapers.
- Annuals for forages, SE newspapers.
- Swath grazing versus greenfeed. Newspaper and newsletter article.
- Alfalfa nutrient deficiencies. An article for the Northeast Extension Newsletter..
- Highlights of GAPT progress over the past year. An article for distribution at the SSGA Annual Meeting and Convention, June 6-8, Maple Creek.
- GAPT activities. An article for the Native Plant Society Newsletter.
- Summary of GAPT's annual report (1998-99). Made available at meetings and fairs.
- Learning to live with quack grass. Farm & Food Report article.
- Ranching for conservation and profit. An article in SAF's Farm & Food Report.
- Ranching for conservation publication, GrainNews article.
- Baling forages. An article for SE newspapers.
- Interviewed for an article on GAPT that appeared in the Oct. 1999 Innovation Issue.
- Grazing management. An article for NW newspapers.
- The Role of clubmoss in soil water, plant water stress and production in northern mixed prairie. An article for the Society for Range Management newsletter.
- Cutting management of alfalafa. An article for the NW newspares.
- Swath grazing: seeding and cutting dates. An article for the NW newspapers.

- Managing the Canadian mixed prairie for improved productivity (Willms, Abouguendia & Freeze, p. 431-437, In Proceedings of the 6th International Rangeland Congress).
- Valuing Standing Hay/Hay Shares, article, NE Region
- Fall Cutting of Alfalfa Fact, NE Region.
- A SAF Farm and Food Report on the Western Canadian Forage and Grazing Conference, Nov. 1999.
- SAF Farm and Food Report on the NW defoliation project.
- A newspaper article on importance of carryover on native range.
- Helped with the North East Forage Association Newsletter.
- A SAF Farm & Food Report on Regrassing Farmland and Rejuvenation publications.
- A newsletter article on Swath Grazing, East Central.
- An article on winter feeding of hay on pasture for the NE Regional newsletter.
- An article for NE Regional papers on Riparian area management.
- An article for SE newspapers on strategy for low feed prices.
- An article for the SE newspapers on alfalfa in pasture and hayland.
- A SAF Farm & Food Report on the Forage, Land and Grazing (FLAG) clubs in the SW.
- A newsletter for the producers in the West 21 Forage Producers Association.
- An article on forage species selection for the SE newspapers.
- An article on electric fencing for the SE newspapers.
- Prepared summaries of producer's presentations for proceedings of Foraging into the Future Conference.
- An article on timothy for the Export Market for the NE regional papers.
- A newsletter to members of West 21 Forage Producers, relaying developments for the grazing project with yearlings from SW Forage Assc. and NE Sask.
- An article on West 21 Grazing Project, March 21 for NW papers.
- An article on buying grass seed of different grades, April 7 for NW papers.
- A newspaper article on tips for forage seeding
- An article on forage seeding in the SW submitted to SAF's Farm and Food Report.
- A list of soil residual herbicides that may damage forage seedlings.
- A SAF Farm & Food Report on Overseeded Legumes Project in the NE.
- A newspaper article on pocket gopher control.
- A Farm and Food Report on the SRM Outstanding Achievement Award presented to GAPT
- Articles for the Farm & Food Report: Large Volume, Low Cost Water Troughs and, Chaff and Straw collection for field grazing.
- An article for the Shaunavon RSC Newsletter and SW newspapers on Forage Seed Quality
- Newspaper article on Extending the Grazing Season
- An article on Purchasing Quality Forage Seed for NW regional newsletter
- An article on forage clubs for the NE extension newsletter
- A newspaper article on seeding forages, jointly with Lorne McLinton
- Portable Windbreak Fences
- The Role of Sustainable Agriculture
- Article for the Farm and Food Report on the Ricegrass growth and production

APPENDIX G
EXAMPLES OF RADIO/TV TOPICS

- The defoliation project, aired on CJNB and CKSA
- Forage selection for saline areas, aired on CJNB and CKSA
- Forage economics and marketing considerations, aired on CJNB and CKSA
- Cow Calf workshop and regional beef seminar, aired on CJNB and CKSA
- Summer calving and pasture condition: 'On the Farm' interview with CKSW radio.
- 'Seed for Thought' an interview with CKSW radio on best time to seed forages and species best adapted to saline areas.
- "Ranching for Profit", aired on CJNB and CKSA radio
- Forage seed production - economics and marketing considerations, aired on CJNB and CKSA
- Quack grass, an interview with CKSW Radio, Swift Current.
- Low-cost cow calf 'On the Farm' interview with CKSW.
- Comparison of economics of grain, forages and livestock, CJNG and CKSA
- Forage selection, CJNG and CKSA
- Fertilizing forages: CJNB & CKSA Radio Stations (NW).
- Seeding cover crops with forages: CJNB & CKSA Radio Stations (NW).
- Range Youth Camp: an interview with Weyburn Radio station.
- Seeding and cutting dates for swath grazing: CJNB and CKSA radio stations (NW).
- Swath grazing vs. baled greenfeed project: CJNB and CKSA (NW).
- Cutting management of alfalfa: CJNB and CKSA radio stations (NW).
- Grazing management at Tom Wood's ranch: CJNB & CKSA (NW).
- Range Youth Camp: a story on the camp in CTV weekend news.
- Forages and grazing, CJNB and CKSA
- Forage rejuvenation, CJNB and CKSA
- Grazing systems, CJNB and CKSA, Dec. 8, respectively.
- Grass-fed Beef for CJNB and CKSA radio stations
- Electric Fences for CJNB and CKSA radio stations
- Forage Selection, CJNB and CKSA
- Forage Establishment, CJNB and CKSA
- West 21 Grazing Project, CJNB and CKSA
- Buying grass seed of different grades, CJNB and CKSA radio
- An interview for Beef Today Magazine on Swath Graze Project
- An interview for Grainews on Large Volume, Low Cost Water Troughs
- Radio interview on CJSN on pasture moisture conditinos
- Two radio interviews during Agribition on GAPT services and seeding forages
- Three radio interviews during Saskatoon Farim Fair on GAPT projects, GAPT services and extending the grazing season
- Radio interview on Large Volume Low Cost water troughs
- An interview with the Western Producer on Goat Browsing Project
- An interview for the Farm & Food Report on Goat Browsing Project
- Agritopic for CJNB and CKSA radio stations
- An interview with the Western Producer on Bison and Elk production

- Agritopic for CJNB and CKSA radio stations
- Agritopic for CNJB and CKSA radio stations
- An Agritopic for CNJB and CKSA radio stations